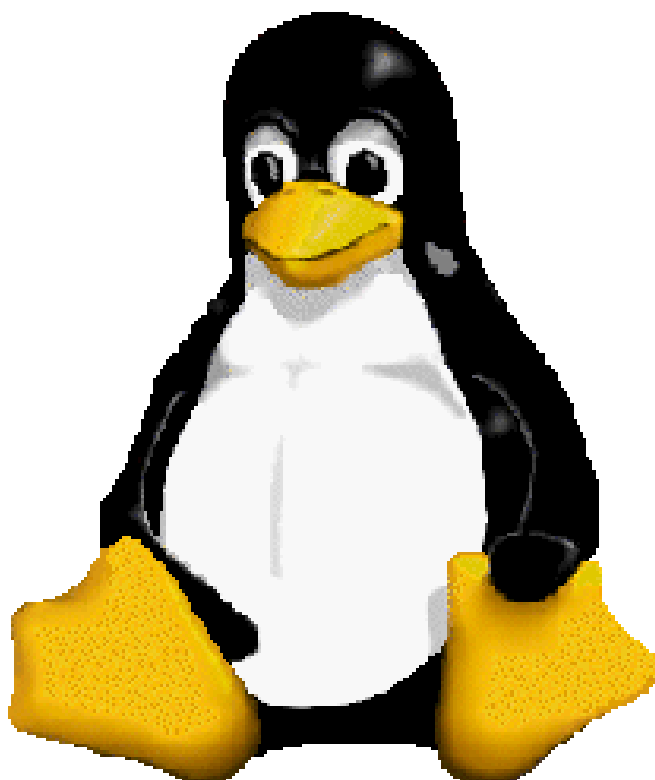


Packet Radio



*... connecting the future ...*

## Linux Installation



Author

Software: Jimmy, DL1GJI

Documentation: Peter HB9PAE

## Table of content

1	Introduction .....	2
1.1	What is (X)Net ? .....	2
1.2	(X)net Hardware Requirements .....	3
1.3	Hardware and Operating Systems .....	3
2	Setup under Linux.....	3
2.1	Installation of Linu(X)Net.....	3
2.1.1	File Names Conventions .....	3
2.1.2	Startup the Node .....	3
2.1.3	Port allocation and configuration .....	3
2.1.4	MYCALL and ALIAS.....	4
2.1.5	AX25 Neighbor Configuration .....	4
2.1.6	Ping-Pong Converse .....	5
2.1.7	IP Router .....	5
2.1.8	Beacon .....	5
2.1.9	CRON Daemon .....	6
2.1.10	Statistic Daemon .....	6
2.1.11	Packet File Transfer Program (PFTP).....	6
3	Interface to the Linux Kernel.....	6
3.1	(X)Net Startup Script .....	6
3.2	(X)Net Interface with TNT Terminal Program.....	7
3.2.1	Host Mode.....	7
3.2.2	KISS / SMACK Mode .....	7
3.2.3	AXIP mode .....	8
3.3	SLIP Interface .....	9

## 1 Introduction

This file shall guide the sysop during installation and configuration of (X)Net Linux Systems. For details to the various commands, the (X)Net manual is recommended. Comments and improvements are welcome and will be integrated into the next release of this document.

The (X)Net Homepage is available at <http://www.swiss-artg.ch>. This site, offers the latest software releases and documentation for download. Jimmy DL1GJI runs a FAQ List on <http://www.gsl.net/dl1gji> where the most interesting questions and their answers are available. We try to answer all questions about (X)Net (so far as they are not mentioned in the (X)Net manual or in the official FAQ).

The (X)Net Discussion Board is available under <http://3net.hypermart.net/index.cgi> . This board is maintained by Raphael Pala.

In case of serious troubles contact HB9PAE@ HB9OS via Packet-Radio or by e-mail [hb9pae@uska.ch](mailto:hb9pae@uska.ch).

### 1.1 What is (X)Net ?

This new packet radio Digipeater software offers new capabilities and performance. (X)NET is a AX25-Multiprotocol-Routing-Software for radio amateur packet radio. It serves the following routing protocols:

- INP3 the optimized NET-ROM routing Protocol
- NET-ROM routing Protocol
- FlexNet routing Protocol
- TCP/IP Router and SLIP Interface

Therefore (X)net will be one of the most adaptive and flexible packet radio Digipeater software, with interfaces to the most major routing algorithms. This flexibility will give the sysop the possibility to have a maximum of functionality in the packet radio network.

## **(X)Net under Linux**

(X)NET is designed for an optimal performance. Data Rates up to 1,5 MBit/s per channel can be achieved with a commercial TNC3S.

### **1.2 (X)net Hardware Requirements**

(X)Net is running under a different hardware platforms.

<b>PCNET16</b>	IMB Compatible PC, 286 CPU Operating System DOS, recommended 1 MB Memory
<b>PCNET32</b>	IMB Compatible PC, 386 CPU Operating System DOS, recommended 8 MB Memory
<b>NTNET</b>	IMB Compatible PC, min 486 CPU Operating System Windows NT or Windows95, min. 8 MB Memory
<b>STNET</b>	Atari ST 1040 ST
<b>3NET</b>	TNC3 with min. 512K RAM or TNC4e with 1 Mbytes RAM
<b>LINUXNET</b>	IMB Compatible PC, 386 CPU Linux-Kernel Version 2.0, 16 MB Memory recommended

### **1.3 Hardware and Operating Systems**

For best performance we recommend the TNC3S Hardware. This Hardware was developed to obtain maximum performance for a Packet Radio System. For PC based systems the Linux Version Linu(X)Net gives you the best performance. For a small system (up to 4 AX25 Ports) PCNET 16 Bit DOS Version will be sufficient, but due to the limited memory capacity under DOS, you will not have all features available.

## **2 Setup under Linux**

### **2.1 Installation of Linu(X)Net**

Copy the (X)Net executable file into the desired subdirectory. In order to allow the assign of Unix Sockets, Linu(X)Net shall run with root privileges.

#### **2.1.1 File Names Conventions**

File suffixes shall be UPPER case only. The files C.TXT and D.TXT contains connect res. disconnect text and will be transmitted with every connect or disconnect. Help files have the suffix INF (e.g. NAME.INF) and are transmitted when the user submits a HELP NAME command.

#### **2.1.2 Startup the Node**

After startup of Linu(X)Net, the login screen at the Sysop Console will display the program version, and the assigned call. In case of a configured system, the assigned drivers are displayed also. Linu(X)Net is trying to read the file AUTOEXEC.NET and will execute the commands. This is the way to save an individual configuration.

Now you are ready to connect to the Node using the command "ESC C Callsign". To get SYSOP use the command SYS, on the terminal port. No password is required.

#### **2.1.3 Port allocation and configuration**

Use the file AUTOEXEC.NET to store the port allocations commands. For tests, the commands can be executed also manually. All character devices in the subdirectory /dev/.... or up to 8 VANESSA card's (16 Ports) can be used to interface the (X)Net node to an external hardware.

## (X)Net under Linux

Sample of AUTOEXEC.NET (Filename upper case !)

```
#
# AUTOEXEC.NET for LINUXNET
# Port allocation
# Use COM 1 in KISS Mode at Port 0, using 1 Channel, 38400 Baud
ATT SDEV0 KISS 0 1 38400 /dev/ttyS0
#
# Use COM2 in SMACK Mode at Port 1, using 1 Channel, 19200 Baud
ATT SDEV1 SMACK 1 1 19200 /dev/ttyS1
#
# Use COM3 in RMNC-KISS Mode at Port 2, 1200 Baud
ATT SDEV2 RMNC 2 1 1200 /dev/ttyS2
#
# Use VANESSA in AX25 Mode at Port 3 and 4
ATT VANESSA AX25 3 2
#
# Use AXIP Socket at Port 5 to Host 44.142.1.1
ATT IP1 AXIP 5 1 44.142.1.1
# eof
```

Copy the File into the (X)Net subdirectory and restart Linu(X)Net. The Login screen will display the assigned Interface Drivers. Define now the required Parameters like TXDelay (in milliseconds e.g. 300 !), Port Name and Port Speed. The Port Parameters will be stored after 10 Minutes, make sure not to quit (X)net before. All Port Commands are available with:

Port X Parameter Value            e.g.: Port 5 Baud 19200

### 2.1.4 MYCALL and ALIAS

After connect to (X)Net and getting sysop (SY command) set the MYCALL of the Node:

MY CALL YOURCALL

Set now the ALIAS

MY ALIAS YOURALIAS

### 2.1.5 AX25 Neighbor Configuration

To define the routing protocol to the neighbors Digipeater, the command ROUTE is available. This configuration is stored into (X)Net's configuration File after 10 Minutes.

#### INP3 Protocol or NET-ROM Protocol:

CMD: Route BC Add Port\_No CALL [via Call] for all Neighbors

Depending of the Neighbors Software, (X)net will use the appropriate routing protocol.

#### FlexNet Protocol:

CMD: Route FlexNet Add Port\_No Call [via Call] for all Neighbors

#### Local Neighbor

Local entries are used to bind any other Stations to the Net. (X)Net remembers local Neighbors in his Router Table, the Parameter ND is defining the way, this callsign will be distributed to the community. N means distribute it to the NET-ROM Neighbors (Node Table), D means distribute it to the FlexNet Neighbors (Destination Table). For the NET-ROM Table, a ALIAS can be defined.

CMD: Route Local Add Port\_No Call N|D|ND ALIAS

#### Example:

```
RO BC AD 1 HB9A                    # INP3/NET-ROM Route to HB9A on Port 1
RO F AD 2 HB9B                    # FlexNet Route to HB9B on Port 2
RO LO AD 3 HB9C ND C-BOX          # Local Station HB9C on Port 3, Alias C-BOX,
                                  # Nodes and Destination Table to propagate Destination
```

## (X)Net under Linux

### 2.1.6 Ping-Pong Converse

To start the converse daemon add the following command to the file AUTOEXEC.NET:

```
START CONVERSD <Converse_Call>
```

The converse call must be different from the Digipaeters MYCALL. It will be used to connect the converse neighbors. To add a Link to a converse-partner, switch to converse mode (cmd "CONV") and submit cmd "/L CALL Port\_No". The port number is needed in case of a pure AX25 Link (L2 Link) otherwise (X)Net uses a Net-Rom Circuit instead. Take note, that the Ping Pong Converse is not able to handle loops, so be careful with configuration. To avoid loops one of the partners should not be active, use port 254 on this side to avoid double Links.

In the Converse mode. Help can be obtained with /H. The Help-File is conversd.xhf (lower case).

### 2.1.7 IP Router

To start the daemon add the following command to the file AUTOEXEC.NET:

```
START ROUTED
```

The commands GETIP, ARP, IPR and PING are now available.

GETIP submits a temporary IP-Number (DHCP protocol) to the user. The temporary IP-Numbers are taken out from the file IPADDR.NET and remain valid for one hour after the last contact.

The ARP- and IPR-Table are used to configurate the IP-Router.

PING xxx (where xxx is the destination IP-Number) is used to test a IP-Route out from (X)Net command prompt. (X)net will then display the measured round trip time (RTT) to the pinged destination.

To attach a SLIP-Driver, add

```
attach SDEV3 SLIP 38400 /dev/ttypf
```

to the AUTOEXEC.NET.

During startup, the IP Router reads the File IP.NET, this file contains the default entries in the ARP or IPROUT List. Add the default entries into the File IP.NET:

Sample of IP.NET:

```
# File: IP.NET
# (X)Net IP Address
myip 44.142.155.65
# ARP entry for all received IP Frames
arp add 44.142.155.66 SLIP SDEV3
# IP Route to HB9AK 44.142.155.166 via AX25
arp add 44.142.155.166 AX25 HB9AK
# Route all IP-Frames with 44.142.64.xx via NETROM to 44.142.155.66
ipr add 44.142.64.0/24 NETROM 44.142.155.66
```

The (X)Net IP-Router will respond to his IP-Number (MYIP), so testing of routes is easy possible. The ARP Table (ARP List) will display the number of received or transmitted IP Frames on the various interfaces.

### 2.1.8 Beacon

The command FBEACON sends a file (up to 256 Char.) to the assigned port. The command should be triggered with a CRONTAB Job.

```
START FBEACON <filename> <port no> <call> [via call]
```

## (X)Net under Linux

### 2.1.9 CRON Daemon

The CRON Daemon reads periodically the file CRONTAB and executes the command, if the cron criteria's (minutes, hours, day, month, day of the week) are met. The implementation is very similar to the same command under Linux.

START CROND

File CRONTAB:

```
#CRONTAB Command File
#
0 0 1 1 * msg all Happy New Year!
#
```

### 2.1.10 Statistic Daemon

To activate the statistic daemon add the following command to AUTOEXEC.NET:

START STATD <interval [sec.]> <filename>

(X)Net will then save the binary data for each port into the file. The Sysop can readout the binary file using "RBN <filename.sta>" and convert the data into ASCII using the DOS Program POSTAT.EXE giving the Port Number as argument. It is possible to import the ASCII Data into EXCEL and generate a diagram. Read the documentation of POSTAT.EXE to get more details.  
To get the actual data online use command "S PO".

### 2.1.11 Packet File Transfer Program (PFTP)

PFTP is used to send files or random data over any AX25 Link. Random data are used to verify the maximum link transfer rate.

Enter into the program with "PFTP <destination\_call>". After connection to the destination, you can execute a remote command to the destination with "Q". To send a file use "PUT <filename>". Random data can be generated by the command "T <no\_of\_bytes>".

To verify the capacity of a certain link, select the null device at the PFTP destination (XNET only) with "Q NULL", the receiver will now accept any data until disconnect..

## 3 Interface to the Linux Kernel

### 3.1 (X)Net Startup Script

I use this startup script on my sytems. (X)Net is running usually on Console 8. In case of termination, this script will record the event into the file "xnet.log" and start the executable "linuxnet.alt". This procedure gives a easy way to make a update of (X)Net.

In case you have a Hostmode program like TNT, (X)Net needs the parameter c to support hostmode. commands.

File: xnet-run

```
#!/bin/sh
# xnet-run: Script to start / restart (X)net after boot
# created 00-04-01 hb9pae
#-----
trap "" 1
cd /xnet
while [ "true" ]
do
    sleep 10
    echo `date` "(X)net start" >> xnet.log

    ./linuxnet < /dev/tty8 > /dev/tty8 2>&1          # use console 8 for (X)Net
```

## (X)Net under Linux

```
# for HOST Mode use parameter c
#./linuxnet -c /dev/ptype # (X)Net Hostmode
exitstatus=$?
echo `date` "(X)Net exit status" $exitstatus >> xnet.log
sleep 10
echo `date` "(X)net Test start" >> xnet.log

./linuxnet.alt < /dev/tty8 > /dev/tty8 2>&1 # use console 8 for (X)Net
# for HOST Mode use parameter c
#./linuxnet.alt -c /dev/ptype # (X)Net Hostmode

exitstatus=$?
echo `date` "(X)Net Test exit status" $exitstatus >> xnet.log
done
```

### 3.2 (X)Net Interface with TNT Terminal Program

TNT is a very flexible terminal program, while TFKISS is used as Host Mode interface towards KISS/SMACK or AXIP. TNT and TFKISS are developed by Mark Wahl DL4YBG.

The TNT Console for (X)Net gives you much more comfort and flexibility comparing the simplified text console. Except for the AXIP Interface, the devices /dev/ptyp[0..f] respective /dev/ttyp[0..f] are used to communicate with the terminal program.

#### 3.2.1 Host Mode

The option "c" enables the Host Mode communication on (X)Net's I/O Channel.

Settings in the File tnt.ini:

```
device /dev/ttype
tnc_channels 4
```

Startup script hostmode:

```
#!/bin/sh
#-----
# Startup Linu(X)Net with TNT in HOST-Mode
# 25-Mar-2000 HB9PAE@HB9OS
#-----
#
XNET_DIR=/home/xnet
TNT_DIR=/usr/bin
TNTCONF_DIR=/usr/share/tnt/conf
HOME_DIR=$PWD
#
# Start Linu(X)Net
echo "..... Start Linu(X)Net now ..."
${XNET_DIR}/xnet-run &
#
#Start TNT
echo "..... Start TNT now ..."
${TNT_DIR}/tnt -u -i ${TNTCONF_DIR}/tnt.ini </dev/tty8 >/dev/tty8 &
# eof
```

#### 3.2.2 KISS / SMACK Mode

TFKISS translates TNT's host data into KISS mode. (X)Net uses one KISS or SMACK port.

Settings in the File tfkiss.ini

```
device device /dev/ptype
```

## (X)Net under Linux

```
kiss_active 1
speed 19200
```

Settings in the File tnt.ini:  
device /var/run/tfkiss\_socket

Settings in the File AUTOEXEC.NET:  
#attach Port 0 KISS mode  
att SDEV0 SMACK 0 1 /dev/tty  
port 0 duplex 1  
port 0 txd 1  
port 0 pers 255

Startup script kissmode:

```
#!/bin/sh
#-----
# File: Startup Linu(X)Net with TNT and TFKISS in KISS-Mode
## 25-Mar-2000 HB9PAE@HB9OS
##-----
#
XNET_DIR=/home/xnet
TNT_DIR=/usr/bin
TNTCONF_DIR=/usr/share/tnt/conf
TFKISS_DIR=/usr/sbin
TFKISSCONF_DIR=/usr/share/tfkiss/conf
HOME_DIR=$PWD
#
# Start TFKISS
echo "..... Start TFKISS now ..."
${TFKISS_DIR}/tfkiss -u -i ${TFKISSCONF_DIR}/tfkiss.ini
#
#Start TNT
echo "..... Start TNT now ..."
${TNT_DIR}/tnt -u -i ${TNTCONF_DIR}/tnt.ini </dev/tty8 >/dev/tty8 &
#
# Start Linu(X)Net
echo "..... Start Linu(X)Net now ..."
${XNET_DIR}/xnet-run &
# eof
```

### 3.2.3 AXIP mode

TFKISS can be configured to translate TNT's host data into AXIP. (X)Net uses one AXIP port to Linux kernel.

Settings in the File tnt.ini  
device /var/run/tfkiss\_socket

Settings in the File tfkiss.ini  
kiss\_active 0  
axip\_active 1

Settings in the File tfkiss.cfg  
route default 127.0.0.1 # localhost or any othe IP adress

Settings in the File AUTOEXEC.NET  
#attach Port 0 to localhost  
att IP0 AXIP 0 1 127.0.0.1



## (X)Net under Linux

```
port 0 duplex 1
port 0 txd 1
port 0 pers 255
```

Startup script axipmode:

```
#!/bin/sh
#-----
# File: Startup Linu(X)Net with TNT and TFKISS in AXIP-Mode
# 25-Mar-2000 HB9PAE@HB9OS
#-----
#
XNET_DIR=/home/xnet
TNT_DIR=/usr/bin
TNTCONF_DIR=/usr/share/tnt/conf
TFKISS_DIR=/usr/sbin
TFKISSCONF_DIR=/usr/share/tfkiss/conf
HOME_DIR=$PWD
#
# Start TFKISS
echo "..... Start TFKISS now ..."
${TFKISS_DIR}/tfkiss -u -i ${TFKISSCONF_DIR}/tfkiss.ini
#
#Start TNT
echo "..... Start TNT now ..."
${TNT_DIR}/tnt -u -i ${TNTCONF_DIR}/tnt.ini </dev/tty8 >/dev/tty8 &
#
# Start Linu(X)Net
echo "..... Start Linu(X)Net now ..."
${XNET_DIR}/xnet-run &
# eof
```

### 3.3 SLIP Interface

This script will establish a SLIP Link from (X)Net to the Linux Kernel, using the device sl0. This script shall be called before startup of (X)Net. At the end of the script an ARP Proxy entry is made.

This is a typical gateway configuration: Local IP Address is 192.168.0.18, while (X)Net uses his own AMPR.ORG Address 44.142.221.1

File start-slip:

```
#!/bin/sh
#-----
# Setup sl0 for XNet / Linux
# 25-Mar-2000 HB9PAE@HB9OS
#-----
#
XNET_DIR=/home/xnet
LINIP=192.168.0.18      # LINUX-IP    address
XNETAMPR=44.142.221.1  # XNET-Ampr  address
#
echo "Initiating SLIP connection to XNET/Linux..."
slattach -s 38400 -p slip /dev/ptypf &
sleep 1
ifconfig sl0 $LINIP netmask 255.255.255.255 pointopoint $XNETAMPR mtu 236 up
#
echo "Set ARP Proxy for XNET ..."
arp -i eth0 -Ds $XNETAMPR eth0 netmask 255.255.255.255 pub
#
```

## **(X)Net under Linux**

```
echo "Start AXIP script now"  
${XNET_DIR}/axipmode  
# eof
```

## (X)Net under Linux

Hello Brian,

I have the applicable configuration for axip and axudp links in [AUTOBOOT.NET](http://AUTOBOOT.NET) as opposed to [AUTOEXEC.NET](http://AUTOEXEC.NET). I have come across different documentation that seems to conflict with respect to which of those files should apply, but this is working for me.

Here is an example of two links - one is AXIP over 44-net, and the other is AXUDP over Internet (not in that order). AXUDP uses UDP port 10092 in both directions.

```
# Link to N9SEO-8
attach ip1 axudp 2 1 110092 d10092 202.5.31.140
```

```
# Link to VE3CLG-8
attach ip4 axip 5 1 44.135.82.17
```

```
po 2 dup 0
po 2 baud 57600
po 2 win 7
po 2 name n9seo-8 XNet
route fl add 2 n9seo-8
route bc add 2 n9seo-8
```

```
po 5 dup 0
po 5 baud 57600
po 5 win 7
po 5 name ve3clg XNet
route fl add 5 ve3clg-8
route bc add 5 ve3clg-8
```

The "route fl" line means to run flexnet over the link.

The "route bc" line means to run INP3. The existing Xnet users tend to run both of those between Xnet nodes.

I also have an AXIP link between Xnet and BPQ. I have a 44-net LAN due to a router based amprnet gateway, so BPQ and Xnet communicate over that.

```
# Link to K5DAT-7
attach ip0 axip 1 1 44.92.0.70
```

```
po 1 dup 0
po 1 baud 115200
po 1 win 7
po 1 name k5dat-7 BPQ
po 1 qual 250
route bc ad 1 k5dat-7
route bc ad 1 NODES
```

The two green lines combined make it a Netrom link. (BPQ is set to run netrom only, so perhaps the first green line above is not needed.)

Below is everything in [AUTOEXEC.NET](http://AUTOEXEC.NET)

```
#### Hier worden de services gestart ####
```

```
# Start the router
start routed
# Start beacond
start beacond
#
# Start tcpcd
start tcpcd
```

## (X)Net under Linux

```
#
start statd 3600
# Und nun der Ping-Pong convers
# start conversd db0xyz-1
# Und die ONLINE-PortStatistik
start postatd
# Und den CALL-Check
start callchkd 100
#
start telnetd
start httpd
#
# Name server
# names 192.168.254.254
# Time server
132.163.97.4
#
# Beacons
BEACON A 600 0 ID text K5DAT-8:DATXN ((X)NET) Flexnet - Net/ROM node.
BEACON A 600 1 ID text K5DAT-8:DATXN ((X)NET) Flexnet - Net/ROM node.
#
my call k5dat-8
my alias DATXN
my tcall k5dat
# my prompt k5dat ==>
```

Feel free to ask any additional questions. I'm fairly new to Xnet myself.

Lee K5DAT

## (X)Net under Linux

Fyi, I recently linked up with Han PE1FAM, and he showed me how to set up the SLIP interface and configure [IP.NET](#). The SLIP interface kind of works like the tunnel in JNOS or XRouter. Below is what he sent me on that.

Lee K5DAT

----- Forwarded message -----

From: **Han**

Date: Tue, Jan 18, 2022 at 3:27 PM

Subject: Re: K5DAT-8 address

To: Lee D Bengston <[kilo5dat@gmail.com](mailto:kilo5dat@gmail.com)>

Hi Lee,

I have a few days off, on Thursday my freedom is gone and I have to go to work.

But I guess we are not in a hurry. Enclosed you will find a picture of my [IP.NET](#) (capitals!).

It is quite self explaining, but you need to do some additional configuring, you can make a slip link to your kernel, you have to do something in [AUTOBOOT.NET](#) and on the kernel side too

In [autoboot.net](#) you have to declare the slip pipe:

## (X)Net under Linux

This connects to the kernel at /var/run/slip.

Before starting XNet you define a link pair with socat (apt install socat) and wait a while until the network is operational

Then make a slip attach slattach to the kernel side (xnet connects to the other side) and finally make a PTP connection.

192.168.2.2 is my raspberry network, 44.137.55.1 is xnet

Finally set up some routing.

In [IP.NET](#) I point my nameserver ip address to my router, and you should be good to go. Sounds pretty easy, but actually it isn't. You will probably have to figure out your routing, be careful with routing [44.0.0.0/8](#) to XNet, it can give you problems connecting to other parts of the [ampr.org](#) network, probably you are safe to start with [44.137.0.0/16](#) (Netherlands) and you should be able to ping my Net node (44,137,55,1, 55.2 and 55.4). In [IP.NET](#) you see Canada as well.

Hope this helps you out,

---  
met vriendelijke groet,  
kind regards,

**Han Sytsma**

## (X)Net under Linux

On 18-01-2022 20:30, Lee D Bengston wrote:

OK Han,

My day job is taking my time now, but I'll look at that later. Also it's not quite sorted yet on the DNS. What is the syntax of the nameserver line in [IP.NET](http://IP.NET)? I see an example of [IP.NET](http://IP.NET) at [packet-radio.net](http://packet-radio.net), but there's no nameserver defined.

Yes, per your earlier message I do not have an IP configuration in Xnet. I was brand new to the program some months ago, and I set up a few links, but that's it. I still don't know it very well. I'd be glad to set things up so that you have a route to the US, but I may need a few pointers.

73,  
Lee K5DAT

On Tue, Jan 18, 2022 at 12:15 PM Han <[han@sytsma.co.uk](mailto:han@sytsma.co.uk)> wrote:

Hi Lee,

Now that's sorted you can start your xnet convers daemon and link it to pi1cdr

fi: **start conversd k5dat-10**

-10 is an example, but it should not be -8 since that is your xnet ssid.

With the conv command in xnet you will reach your convers session..

In sysop mode in your convers session, you can add a link to pi1cdr, command: **/l pi1cdr**

In this way you will be connected to ww convers system, you can give it a try at pi1cdr.

All commands in converse are preceded with a / (/h for help).

---  
met vriendelijke groet,  
kind regards,

**Han Sytsma**

On 18-01-2022 19:00, Lee D Bengston wrote:

Thanks very much for the info. I had not used DNS before with Xnet as I am fairly new to it. I will change to use the dash in front and also make sure I have a name server defined.

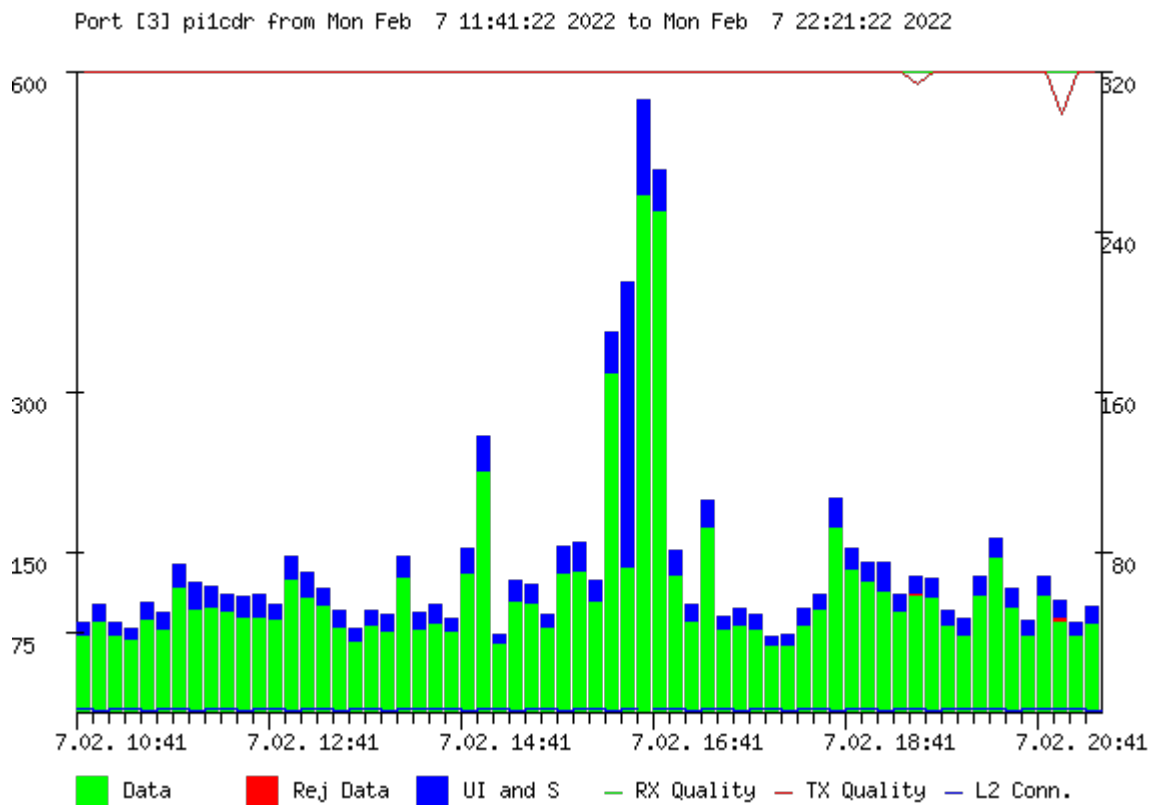
Lee K5DAT

On Tue, Jan 18, 2022 at 10:34 AM Han <[han@sytsma.co.uk](mailto:han@sytsma.co.uk)> wrote:

Hi Lee,

It has been working a while as you can see

## (X)Net under Linux



You changed the line to [pilcdr.sytsma.co.uk](http://pilcdr.sytsma.co.uk), maybe you are aware that a minus must be in front of the fqdn:

- [pilcdr.sytsma.co.uk](http://pilcdr.sytsma.co.uk)



## (X)Net under Linux

I also noticed that you don't have a IP configuration in XNet, I have 2 IP routes, one to Canada and one to Germany. Would be nice if I could have one is the US.

---  
met vriendelijke groet,  
kind regards,

**Han Sytsma**

e: [han@sytsma.co.uk](mailto:han@sytsma.co.uk)

t: +31 6 23001982

On 18-01-2022 17:15, [dummy@PI8CDR.DRE.NLD.EURO](mailto:dummy@PI8CDR.DRE.NLD.EURO) wrote:

R:220118/1600Z @:PI8CDR.#DRE.NLD.EURO #:38583 [Westerbork] \$:39169\_K5DAT

R:220118/1558Z [17044@PI8SNK.#FRL.NLD.EURO](mailto:17044@PI8SNK.#FRL.NLD.EURO) [SNEEK/SNITS] FBB7.01.35\_alpha

R:220118/1542Z @:PE1RRR.#NBW.NLD.EURO #:31639 [Rijen] \$:39169\_K5DAT

R:220118/1542Z [25470@PI8BDG.#ZH1.NLD.EURO](mailto:25470@PI8BDG.#ZH1.NLD.EURO) LinBPQ6.0.22

R:220118/1540Z @:F1OYP.FAQI.FRA.EU #:53343 [St-Astier] FBB7.00i \$:39169\_K5DAT

R:220118/1537Z @:VE2PKT.#TRV.QC.CAN.NOAM #:60058 \$:39169\_K5DAT

R:220118/1536Z [39169@K5DAT.#SCWI.WI.USA.NOAM](mailto:39169@K5DAT.#SCWI.WI.USA.NOAM) LinBPQ6.0.22

## (X)Net under Linux

Hi Han,

I found a copy/paste error in the configuration that I added last night.

I had copied the attach line for ip4 and edited it to add the ports, etc., but I failed to change "axip" to "axudp".

It looks like it came up after that. I started with 80.100.7.140, and that is working. I have changed the line to [pilcdr.sytsma.co.uk](mailto:pilcdr.sytsma.co.uk), but I have not restarted Xnet yet. I expect it to work because I am also on version 1.39. Thanks for letting me know that it supports DNS.

I'll restart Xnet a little later to invoke that last change.

73,

Lee K5DAT

P.S. That is an interesting forwarding path. I'll have to ask Jean to forward messages addressed to me either directly to me or to W9GM or N9PMO.

Original Message

R:220118/1231Z @:GB7CIP.#32.GBR.EURO #:58637 [Caterham Surrey GBR]  
R:220118/1231Z [6172@VE3KPG.#ECON.ON.CAN.NOAM](mailto:6172@VE3KPG.#ECON.ON.CAN.NOAM) BPQ6.0.22  
R:220118/1224Z @:VE2PKT.#TRV.QC.CAN.NOAM #:60051 \$:38572\_PI8CDR  
R:220118/1059Z @:PI8CDR.#DRE.NLD.EURO #:38572 [Westerbork] \$:38572\_PI8CDR

```
=====
= Processed at the mailgateway PI8CDR =
= version 0.2, Jan 09, 2022           =
= Han Sytsma, PE1FAM                  =
=====
```